

APPLICATION

FOR

UNITED STATES LETTERS PATENT

TO ALL WHOM IT MAY CONCERN;

BE IT KNOWN THAT I, **STEVE JOHNSON**, a citizen of the United States,
have invented new and useful improvements in a

**CAMOUFLAGE AND OTHER PATTERNS, ARTICLES COMPRISING THEM, AND
METHODS OF MAKING AND USING SAME**

of which the following is a specification:

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**CAMOUFLAGE AND OTHER PATTERNS, ARTICLES COMPRISING
THEM, AND METHODS OF MAKING AND USING SAME**

RELATED APPLICATIONS

The present application is related to U.S. Provisional Application No. 60/446,801 (filed February 12, 2003), the contents of which are incorporated herein in their entirety by reference.

SUMMARY OF THE INVENTION

10 The present invention relates to one or more patterns or designs (particularly camouflage patterns) and to any article comprising one or more of such patterns or designs. Such patterns comprise one or more images of any animal or part thereof. The patterns of the invention may comprise one or more of the same or different images of a particular animal and/or part thereof. Thus, the inventions may comprise multiple images (which may be the same or different images) of a particular animal, and/or multiple images (which may be the same or different images) of the same or different parts of a particular animal. The pattern of the invention may also comprise one or more images of a number of different animals and/or parts thereof and such
20 images may be the same or different. Thus, the pattern of the invention may comprise combinations of different images of different animals and/or

combinations of different images from different parts of different animals. In accordance with the invention, the images do not need to be an identical reproduction of the animal or part thereof and thus may be only a likeness of the animal or part thereof. The invention thus allows the use of various animal images to develop a variety of different patterns (preferably camouflage patterns), each of which may have different combinations of designs and/or colors depending on the choice and positioning of the images. The invention thus allows the design of a multitude of patterns (including camouflage patterns) to suit any need.

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In addition to the animal images, the pattern may also comprise one or more images of one or more of the same or different plants and/or parts thereof. Accordingly, the pattern of the invention may include a number of images of both plants and animals (and/or parts thereof). The invention thus allows the use of various animal and plant images to develop a variety of different patterns (preferably camouflage patterns). Each such pattern may have different combinations of designs and/or colors depending on the choice and positioning of the images.

Images used according to the invention may be derived from any animal (or part thereof) including an insect, such as a moth, a fly (particularly the type of flies used for fly fishing such as a caddis fly and a stone fly), a caterpillar, a butterfly, a spider, a snail, a slug, a scorpion, a bee, a wasp, a hornet, a dragonfly, a millipede, a centipede, a worm, a woodlice, a flea, a termite, an ant, a stick bug, a grasshopper, a cricket, a beetle, a praying mantis, a roach or any other known insect. Insects that may be later identified in nature may also be used in accordance with the invention.

Although any insect may be used, those that have pattern(s) that help conceal
10 them in nature are preferable, particularly in developing or designing a camouflage pattern of the invention. Flying insects are also preferred according to the invention. Illustrative examples of insects for use in the invention may be found in a number of references and books such as “Insects” by Clarence Cottam, et. al.; “Spiders and Their Kin” by Herbert W. Levi, et. al.; “Butterflies and Moths” by Robert T. Mitchell et. al.; “Butterflies Through Binoculars” by Jeffery Glassberg; “An Obsession with Butterflies” by Sharman Apt Russell; “Peterson First Guide to Butterflies and Moths” by Paul A. Opler; “Dragonflies Through Binoculars” by Sidney W. Dunkle; “Butterflies of North America” (Kaufman Focus Guide) by Jim P.
20 Brock et. al.; “Peterson First Guide to Caterpillars of North America” by

Amy Bartlett Wright et. al.; “Stokes Beginner’s Guide to Dragonflies” by Donald and Lillian Stokes; “Discovering Moths” by John Himmelman; “Smithsonian Handbooks, Butterflies and Moths” by David J. Carter et. al.; “Butterflies and Moths of Britain and Europe” by David Carter; “Collin’s Wild Guide to Butterflies and Moths” of Britain and Europe” by John Still; “Collin’s Field Guide: Insects of Britain and Europe” by Michael Chinery; “National Audubon Society Field Guide to Insects and Spiders” by National Audubon Society; “National Audubon Society Field Guide to Butterflies” by National Audubon Society; “Fascinating World of Butterflies and Moths” by 10 Bob Gibbons et. al.; “Butterflies and Moths: A Golden Guide from St. Martin’s Press” by Robert T. Mitchell; “Butterflies and Moths” by Bobbie Kalman et. al.; “Moths and Butterflies” by Shane McEvey; “Moths and Butterflies of North America (Animals in Order)” by Ilka Katherine List; and “Moths and Butterflies: Nature Books Series” by Dave Beaty; all of which are incorporated herein in their entirety by reference. In one aspect, the pattern of the invention does not include images from one or more of the specifically mentioned insects (above) and in another aspect it does not include any insect image.

Other animals include a bird, known or later identified, such as a road runner, a duck, a goose, a chucker, a sand piper, a quail, a pheasant, a humming bird and the like. Illustrative examples of birds for use in the invention may be found in a number of references and books such as “Birds of North America, Smithsonian Handbooks” by Fred Alsop; “The Eternity Code (Artemis Fowl, Book 3)” by Eoin Colfer; and “Birds” by Ira N. Gabrielson; all of which are incorporated herein in their entirety by reference. In one aspect, the pattern of the invention does not include images from one or more of the specifically mentioned birds (above) and in another aspect it does not include any bird image.

Other animals that may be used according to the invention include a reptile, a snake, a lizard, a turtle, a frog, an alligator, a fish, an eel and any mammal, reptile, fish and amphibian. Illustrative examples of mammals, reptiles, fish and amphibians for use in the invention may be found in a number of references and books such as “Reptiles and Amphibians” by Hobart M. Smith et. al.; “Fishes” by Hurst H. Shoemaker et. al.; “Pond Life” by George K. Reid; and “Mammals” by Donald F. Hoffmeister et. al.; all of which are incorporated herein in their entirety by reference. In one aspect, the pattern of the invention does not include images from one or more of the

specifically mentioned reptiles, fish, amphibians, snakes, frogs etc. (above) and in another aspect it does not include any reptiles, any amphibians, and/or any mammals.

Generally, animals that have natural colors and/or patterns that help conceal them in nature are preferably used and one or more images can be derived from those animals for use in the pattern of the invention and such animal images are particularly suited for use in making a camouflage pattern of the invention. Preferred animal colors may include all shades and
10 variations of blacks, grays, blues, pinks, purples, browns, tans, whites, greens, yellows, oranges, reds, and various combinations thereof. The natural color of the animal may be used in developing the pattern of the invention or different coloring or shading can be used depending on the desired color and/or pattern.

Plants used in the invention include any known plants such as any tree, any bush, any flower, any moss, any fern, any palm, any shrub, any weed, any grass, any vine, and any vegetable. Any part or parts of the plant may also be used such as the leaf, the bark, the twig, the branch, the bud, the
20 flower, and the stem. Illustrative examples of trees for use in the invention

may be found in a number of references and books such as “Trees” by Alexander C. Martin, which is incorporated herein in its entirety by reference. Combinations of different colored plants at different stages of their development may be used in the invention as well as plants from different times of the season (winter, fall, spring and summer). Preferred plant colors may include all shades and variations of blacks, grays, blues, pinks, purples, browns, tans, greens, yellows, reds, whites, oranges, and various combinations thereof. The natural color of the plant may be used in developing the pattern of the invention or different coloring or shading can be used depending on the desired color and/or pattern. In accordance with the invention, the images do not need to be an identical reproduction of the plant or part thereof and thus may be only a likeness of the plant or part thereof. In one aspect, the pattern of the invention does not include images from one or more of the specifically mentioned plants (above) and in another aspect it does not include any plant image.

Other images derived from nature or man-made materials may be used alone or in combination with other images to design the pattern of the invention. Images of rocks, stones (granite, marble, coal, etc.), water (streams, lakes, oceans, etc.), clouds, sky, space, sand, dirt and the like may

be used. Preferred colors of such images may include all shades and variations of blacks, grays, blues, pinks, purples, browns, tans, greens, yellows, reds, whites, oranges, and various combinations thereof. The natural color of the image may be used in developing the pattern of the invention or different coloring or shading can be used depending on the desired color and/or pattern. In one aspect, the pattern of the invention does not include images from one or more of the specifically mentioned natural or man-made materials (above) and in another aspect it does not include any of such natural or man-made material images.

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In addition to the images used, one or a number of background colors can be used in the pattern of the invention. These colors can be used behind, around or near the animal and/or plant images (or other images) to produce the desired pattern. Varying the background can be used to change the color of the pattern or can be used to vary or change the appearance of the image or images used. Colors that may be used include all shades and variations of blacks, grays, blues, pinks, purples, browns, tans, greens, yellows, oranges, reds, whites and various shades, and combinations thereof. These colors (and variations or combinations thereof) may be selected depending on the desired application and the environment in which the pattern is intended for use.

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Thus, by varying the images, designs, patterns and colors and by utilizing different combinations thereof, any pattern can be designed. In a preferred aspect, the invention allows the production of camouflage patterns that will aid in concealment. By varying the images, designs, patterns and colors and by utilizing different combinations thereof, any camouflage pattern can be designed for the particular environment in which it will be used. The selection and use of one or a number of images and colors allows preparation of a multitude of patterns (particularly camouflage patterns) that are useful for any particular purpose or application.

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The invention thus relates to any pattern (and camouflage and camouflage patterns) and any article comprising them. The article comprising the pattern of the invention can be made of any material (for example, wood, metal, plastic, rubber, paper, cloth, or any combination thereof). The pattern of the invention may be applied to, contacted with or be a part of any number of items or articles including furniture (such as a stool, a chair, and a couch), a tree stand, a hunting blind, clothing, hats, pants, shirts, gloves, boots, dresses, belts, shorts, coats, shoes, tennis shoes, jackets, sweat shirts, buildings, vehicles, weapons (knives, guns, pistols, bows,

cross bows, tanks, artillery, etc.) and the like. The pattern of the invention may cover all of the article or may cover a portion of the article.

The invention also relates to the use of the camouflage or camouflage pattern of the invention to assist in the concealment of any article in any environment (for example, the outdoors). Thus, the camouflage of the invention may be used to help conceal or hide a person (such as a hunter or military personnel), an animal and/or an article such as equipment, a building, a vehicle, a weapon, clothing, and the like, in any environment.

10 The camouflage of the invention thus makes it more difficult to detect an article, a person and/or an animal comprising the camouflage of the invention in any particular environment than it is to detect the same article, person and/or animal not comprising such camouflage pattern. One particular comparison to test the effectiveness of the camouflage of the invention to assist in concealment is to cover all or a part of a first article with the camouflage of the invention and not cover a second article (which is preferably the same or the same type of article as the first) with that camouflage. The second article preferably has a particular color that may be associated with the article but preferably is a solid color and is not covered
20 with any pattern or camouflage. Then the first and second articles are placed

in an environment or in nature at the same distance from a viewer (or detection means) and if the viewer (or detection means) has more difficulty in seeing or detecting the first article compared to the second article than the camouflage pattern used is said to help conceal or will aid in concealment. The invention is particularly suited for hunting and military applications in which the invention prevents detection by an animal and/or a person. The invention may also be useful to prevent detection by certain detection equipment. Thus, the invention is also directed to a method to help conceal or aid in concealment of a person, an article and/or an animal comprising (a) obtaining an article, a person and/or an animal comprising a camouflage pattern of the invention, and (b) placing said article, person and/or animal in an environment or in the outdoors.

The invention also relates to methods to make the pattern (and camouflage or camouflage pattern) of the invention and to methods to make the articles comprising them. Many methods may be used to obtain one or more images from an animal (or part thereof) and such methods can be used to obtain other images for use in the invention. Such images can be obtained or captured by photography (for example with a digital camera), digital imaging, scanning, printing, painting, and drawing. The images may also be

obtained or down loaded from various web sites and pictures from the world wide web. For example, images and pictures of various animals (including insects) can be found by using known search sites such as Google.com. The images may also be reproduced and/or transferred by any means such as by copying, digitization, computer processing, and printing. Such images can then be manipulated to create a pattern of the desired design by combining various images and/or colors to make a pattern of interest. Preferably, the images are digitized (using a scanner, digitization, digital camera or by other methods) and then the digitized images are manipulated into a pattern by

10 using well know software and computer systems including for example Photoshop™. The pattern of the invention may then be transferred to any support or medium or to any article by well known processes such as water transfer printing, Kolorfusion™ printing, heat transfer printing, pigment printing and screen printing. Thus, in one aspect, the invention relates to method of making a pattern comprising; (a) obtaining one or more digital images of at least one animal or portion thereof (or other image), or digitizing one or more images of at least one animal or part thereof (or other image), and (b) arranging said images to produce a pattern or design. Other images may be added in the pattern such as images from plants or parts

20 thereof. Such method may also include the step of covering all or a portion

of the article with the pattern. The method may also include contacting the pattern with any article or placing the pattern on any article. In a preferred aspect, such pattern may be used as camouflage, which preferably aids in concealment of an article, a person and/or an animal in any environment or in nature. The camouflage pattern preferably comprises a plurality of images of the same or different animals and/or parts thereof and may optionally include one or more images of plants and/or parts thereof and/or other images. Preferably, the animal is an insect and more preferably is a flying insect. In one preferred aspect, the animal is a moth and/or butterfly, and/or part thereof such as a wing or wings.

In another aspect, a method of making an article which includes a pattern or camouflage pattern is provided which includes the steps of: capturing an image of an animal such as a flying animal; digitizing the captured image; transferring the digitized image to a computer system which includes image processing software; processing the digitized captured image with the image processing software to provide a processed captured image; and producing an article which bears the processed captured image, such that the article bears a camouflage pattern.

The flying animal can be a flying insect. The flying insect can be a moth. Preferably, the captured image can be the image of a moth wing, and the article provides a camouflage pattern comprising elements resembling the pattern of the moth wing.

The article which bears the pattern or camouflage pattern can be in the form of a sheet which bears the pattern or camouflage pattern. The sheet which bears the pattern or camouflage pattern can be a cloth. The cloth which bears the pattern or camouflage pattern can be fashioned into a garment, such as clothing. The cloth which bears the pattern or camouflage pattern can be fashioned into a hat.

In addition, the sheet which bears the pattern or camouflage pattern can be applied to a weapon such as a rifle or an archer bow, can be applied to eyewear, and can be applied to binoculars, among other articles.

In accordance with another aspect of the invention, an article is provided which includes a flying animal camouflage pattern which is composed of elements similar to an exterior surface of a flying animal. The flying animal camouflage pattern can be similar to or mimic an exterior

surface of an insect. The flying animal camouflage pattern can be similar to or mimic an exterior surface of a moth. The flying animal camouflage pattern can be similar to or mimic an exterior surface of an insect wing. Preferably, the flying animal camouflage pattern can be similar to or mimic an exterior surface of a moth wing.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be better understood and the above objects as well as objects other than those set forth above will become more apparent after a study of the following detailed description thereof. Such description makes reference to the annexed drawing wherein:

Figure 1 is a perspective view showing apparatus employed for carrying a method of making camouflage articles of the invention, employing a moth wing.

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Figure 2 is a front view of a person wearing a hat and clothing bearing a camouflage pattern made in accordance with the method of making camouflage articles of the invention.

Figure 3 includes a side view of a weapon, a perspective view of eyewear, and a perspective view of binoculars, each of which bears a camouflage pattern made in accordance with the principles of the invention.

Figure 4 is a facsimile of a camouflage pattern produced in accordance with the invention and designated as a Mothy LeafTM pattern.

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Figure 5 is a facsimile of a camouflage pattern produced in accordance with the invention and designated as a MothTree™ pattern.

Figure 6 is a facsimile of a camouflage pattern produced in accordance with the invention and designated as a Mothy Oak™ pattern.

DESCRIPTION OF THE PREFERRED EMBODIMENT

With reference to the drawings, a new and improved method of making camouflage articles embodying the principles and concepts of the present invention will be described.

In this respect, in general, a method of making an article which includes a camouflage pattern is provided which includes the steps of: capturing an image of a flying animal; digitizing the captured image; transferring the digitized image to a computer system which includes image processing software; processing the digitized captured image with the image processing software to provide a processed captured image; and producing an article which bears the processed captured image, such that the article bears a camouflage pattern.

The flying animal can be a flying insect. The flying insect can be a moth. Preferably, the captured image can be the image of a moth wing, and the article provides a camouflage pattern composed at least in part of elements resembling or mimicking the pattern of the moth wing.

The article which bears the camouflage pattern can be in the form of a sheet which bears the camouflage pattern. As shown in Figure 2, the sheet which bears the camouflage pattern can be a cloth. The cloth which bears the camouflage pattern can be fashioned into a garment, such as clothing 20. The cloth which bears the camouflage pattern can be fashioned into a hat 22.

In addition, as shown in Figure 3, the sheet which bears the camouflage pattern can be applied to a weapon 24, can be applied to eyewear 26, and can be applied to binoculars 28, among other articles. The sheet can be affixed to the article using an adhesive material, by screen printing, or by other known image transfer methods.

Among a wide variety of camouflage patterns capable of being produced in accordance with the present invention, three specific camouflage patterns comprising elements derived from or mimicking moth wings are shown in Figures 4, 5, and 6, respectively.

In accordance with another aspect of the invention, an article is provided which includes a flying animal camouflage pattern comprises elements similar to an exterior surface of a flying animal. The flying animal

camouflage pattern can be similar to or mimic an exterior surface of an insect. The flying animal camouflage pattern can be similar to or mimic an exterior surface of a moth. The flying animal camouflage pattern can be similar to or mimic an exterior surface of an insect wing. Preferably, the flying animal camouflage pattern can be similar to or mimic an exterior surface of a moth wing.

Turning to Figure 1, apparatus is shown for carrying out the method of the invention. In this respect, to carry out the method of the invention, an
10 image of a moth wing 12, for example, is captured by a camera 14. Preferably, the camera 14 is a conventional digital camera so that a digitized image can be transferred to a computer system 30 as is well understood. Otherwise, an analog image can be scanned and digitized before transfer to the computer system 30. The computer system 30 includes known image processing software, and the digitized image from the camera 14 is processed by the computer system 30 and the image processing software to provide a processed captured image. The processed captured image is transferred to an output device, such as printer 16, which transfers the processed captured image to a sheet article, such as cloth, or image transfer paper 18, such that

the article bears the processed captured image which serves as a camouflage pattern for the article.

The processed captured image can be stored on a diskette 32 for future use or for use in another computer system and article producing system.

A wide variety of flying animals can be used, among which are flying insects. A wide variety of flying insects can be used, among which are moths. Preferably, the wings of the moth are employed for capturing images
10 to be processed for camouflaging articles.

Hereinbelow is provided a sampling of specific moth wing camouflage patterns, and articles containing the specific camouflage patterns, which are made in accordance with the invention. Each specific camouflage pattern is identified by a respective trade name, a respective camouflage name, a respective scientific name, and a respective best mode of use. More information about each respective camouflage pattern can be found on the Internet at the following Web sites www.mothwingcamo.com of JT&O Technologies LLC and www.awesomehunting.com.

Mothy OakTM Camo Name MothyOak. This is a combination of three different species of Moth. This is an all purpose camo pattern which blends into a multitude of environments. Figure 6 represents a facsimile of this camouflage pattern.

Mothy LeafTM Camo Name MothyLeaf. This is a combination of two different species of Moth. This is an all purpose camo pattern which blends into a multitude of environments. Figure 4 represents a facsimile of this camouflage pattern.

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MothTreeTM Camo Name MothTree, Scientific Name: Phlogophora-iris. Best used in heavy timber, oak or hardwood forests. Figure 5 represents a facsimile of this camouflage pattern.

MothTree BrownleafTM Camo Name MothTree Brownleaf, Scientific Name: Acronicta psi. Best used in fall or early winter, heavy timber, oak or hardwood forests.

MothTree Greenleaf™ Camo Name MothTree Greenleaf, Scientific Name: Acronicta psi. Best used in spring or summer, heavy timber, oak or hardwood forests.

Timber Moth™ Camo Name TimberMoth, Scientific Name: Lytrosis unitaria. Best used In heavily wooded areas, dark pine forests, etc.

TimberMoth Brownleaf™ Camo Name TimberMoth Brownleaf, Scientific Name: Lytrosis unitaria. Best used In fall to early winter, heavily wooded areas, etc.

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TimberMoth Greenleaf™ Camo Name TimberMoth Greenleaf, Scientific Name: Lytrosis unitaria. Best used In spring or summer, heavily wooded areas, dark pine forests, etc.

TimberMoth Branch™ Camo Name TimberMoth Branch, Scientific Name: Lytrosis unitaria. Best used In fall to early winter, heavily wooded areas, etc.

Marsh Moth™ Camo Name MarshMoth, Scientific Name: *Paleprom.*

Best used In heavy marsh grass, wetland environments, etc.

Tundra Moth™ Camo Name TundraMoth, Scientific Name:

Phlogophora-iris. Best used In tundra or cypress wooded swamp.

Winder Moth™ Camo Name WinterMoth, Scientific Name: *Nola*

confusalis. Best used In winter forests.

10 Woodland Moth™ Camo Name WoodlandMoth, Scientific Name:

Manduca sexta. This is a general purpose camouflage. It can be used in many diverse settings.

Bayou Moth™ Camo Name BayouMoth, Scientific Name:

Phlogophora-iris. Best Used In heavily wooded bayous, swamps, or sloughs.

Canyon Moth™ Camo Name CanyonMoth, Scientific Name:

Abagrotis alampeta. Best used In rocky, barren terrain, canyons, etc.

CanyonMoth Branch™ Camo Name CanyonMoth Branch, Scientific

Name: Abragrotis alampeta. Best used In rocky, barren terrain, canyons, etc.

The sheet articles provided by the method of making camouflage articles of the invention can be made from inexpensive and durable cloth, plastic or paper materials.

The foregoing detailed description is considered as illustrative only of the principles of the invention. Numerous modifications and changes will readily occur to those skilled in the art and therefore, it is not desired to limit the invention to the exact construction and operation shown and described. For example, numerous other and different camouflage patterns may be produced using the method of the present invention by adding other pictorial image elements to the pattern such as leaves, twigs, branches and so on, just to name a few. Accordingly, all suitable modifications and equivalents falling within the broad scope of the subject matter described above may be resorted to in carrying out the present invention.